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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,748

06/22/2006

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P19146-US1

1054

27045 7590 01/15/2009  
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EXAMINER

GHOWRWAL, OMAR J

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

01/15/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,748	<b>Applicant(s)</b> CARLSSON ET AL.	
	<b>Examiner</b> OMAR GHOWRWAL	<b>Art Unit</b> 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: under the "SUMMARY OF THE INVENTION", page 5 of the instant application, various claims are listed as accomplishing the object of the invention, however, these claims have been cancelled by the Applicant.

Appropriate correction is required.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. **Claims 14-20** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claims 8-14** of U.S. Publication No. 2007/0111745 A1. Although the conflicting claims are not identical, they are not

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patentably distinct from each other because the limitation of the instant application's claim 14, the 4<sup>th</sup> limitation says "the BSS operates the packet data scheduler according to the steps of", and in the conflicting application's claim 8, the "the packet data scheduler is operative to", although not worded exactly the same, perform the same function and contain the same steps. Additionally, the rest of the claimed limitations appear to be identical to the conflicting application.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claim 20** is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of *In Re Bilski* 88 USPQ2d 1385. The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. The method including steps of receiving, determining, scheduling, and transmitting is broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent. For example, it is unclear what is performing the steps of the method.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claim 16** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 16, the third limitation is a repeat of the first limitation.

### ***Claim Objections***

7. Claims 11 is objected to because of the following informalities: (P\_PDS(t-1) should have a “)” at the end, and “the second part” in the final limitation should be “the second part of the control data of the present transmission interval of the control channel”.

8. Claim 12 is objected to because of the following informalities: (P\_PDS(t-1) should have a “)” at the end.

9. Claims 13 is objected to because of the following informalities: “the first part” in should be “the first part of the control data of present transmission interval of the control channel”, and “the second part” should be “the second part of the control data of present transmission interval of the control channel”.

10. Claim 14 is objected to because of the following informalities: “the transmit power rate of change” lacks proper antecedent basis, “operating” should be “operates”.

11. Claim 16 is objected to because of the following informalities: remaining power is followed by (P\_AVBL(t)) in the first and third limitations, but the second limitation has it as (P\_REM(t)).

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12. Claim 20 is objected to because of the following informalities: in the last limitation "P\_PERM (t)" should be in parentheses, and "the actual power" lacks proper antecedent basis.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,283,508 B2 to *Choi et al.* ("*Choi*") in view of U.S. Publication No. 2004/0202104 A1 to *Ishii et al.* ("*Ishii*") and in further view of U.S. 2003/0125068 A1 to *Lee et al.* ("*Lee*").

As to **claim 11**, *Choi* discloses a method, in a transmission unit, for transmitting packet data on at least one shared packet data channel and control data on a control channel (fig. 3, HS-PDSCH and HS-SCCH), wherein control data for a given transmission interval (t) on the control channel pertains to at least the allocation of data for an associated transmission interval (t) on the shared packet data channel (fig. 3 take given interval to be the second TTI), wherein the transmission interval (t) of the control channel is overlapping the transmission interval (t) of the shared packet data channel (fig. 3, note the overlap), such that a first part of the control data of a present transmission interval of the control channel is transmitted while data may be transmitted

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on the shared packet data channel according to a previous transmission interval ( $t-1$ ) (fig. 3, HS-SCCH and HS-PDSCH overlap at 2nd TTI, and first part of control channel transmitted according to 1st TTI), and a second part of the control data of the present transmission interval of the control channel is transmitted while packet data is to be transmitted on the shared packet data channel according to the present transmission interval ( $t$ ) (fig. 3, this is 2<sup>nd</sup> TTI, where there is overlap), the shared packet data channel and the control channel operating on the same frequency spectrum (fig. 3, col. 4, lines 54-64, HS-PDSCH and HS-SCCH are part of HSDPA, i.e. which is a standard of WCDMA, which has channels operating on same frequency spectrum), the method comprising the steps of:

scheduling data for transmission (fig. 13, scheduler 1350);

*Choi* does not expressly disclose determining the available power ( $P_{AVLB}(t)$ ) for transmission on the control channel and the shared packet data channel;

determining: the power level of the shared packet data ( $P_{PDS}(t-1)$ ) at a previous transmission interval;

the power level of the shared packet data ( $P_{PDS}(t)$ ) at the present transmission interval;

the power level of the control channel ( $P_{SC\_P1}(t)$ ) for the first part of the present transmission interval;

setting the power level of the second part ( $P_{SC\_P2}(t)$ ) as the power level of the first part ( $P_{SC\_P1}(t)$ ) adjusted by a function ( $F$ ) based on the power level of the shared

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packet data channel at the present transmission interval ( $P\_PDS(t)$ ) and the previous transmission interval ( $P\_PDS(t-1)$ ).

*Ishii* discloses in fig. 3, 6, Max total transmission power of base station and max total transmission power of HS-channel (available power), and the power of the HS-SCCH and HS-PDSCH channels at previous and current TTI's. Furthermore, the power level of the shared channel is updated as  $P\_HS-SCCH = P\_A-DPCH_i + \text{del}(i)$  (para. 0064), i.e. setting the power level depending upon another channel power level and various factors incorporated in  $\text{del}(i)$ . Additionally, it is known that HS-SCCH power is affected by that of PDSCH (para. 0022), and adjusting  $\text{del}(i)$  is based on feedback information (i.e. past) of HS-DSCH in the HS-PDSCH, i.e. HS-PDSCH is used in the shared channel update.

*Choi* and *Ishii* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the power measurements as taught by *Ishii* into the invention of *Choi*.

The suggestion/motivation would have been to efficiently control transmission power of a shared control channel (*Ishii*, para. 0025).

*Lee* discloses in fig. 1, a power control algorithm measuring  $E_b/N_t$ , then calculating a new  $E_b/N_t\_new$ . A modified  $E_b/N_t\_mod = (E_b/N_t)_new + F(\text{interference, position of terminal, transmission power, channel condition})$ , i.e. setting a shared channel update as the first part after frame received  $(E_b/N_t)_new$  adjusted by "F", which



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contains factors including interference, transmission power, and channel condition (i.e. take to be the measured intervals of Ishii).

*Choi, Ishii, and Lee* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the power measurements as taught by Lee into the invention of Choi and Ishii.

The suggestion/motivation would have been to perform power control in a communication system (Lee, para. 0009).

15. **Claim 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,283,508 B2 to *Choi et al.* ("*Choi*"), U.S. Publication No. 2004/0202104 A1 to *Ishii et al.* ("*Ishii*"), and U.S. 2003/0125068 A1 to *Lee et al.* ("*Lee*") and in further view of U.S. Publication No. 2004/0086137 A1 to *Yu et al.* ("*Yu*").

As to claim 12, *Choi, Ishii, and Lee* further disclose the method according to claim 11, wherein the function (F) corresponds to the difference between the power level of the shared packet data channel at the present transmission interval ( $P_{PDS}(t)$ ) and an adjustment factor (Ishii, para. 0079,  $del(i) = del(i) - del(adj) * BLER\_target$ ). In addition, the suggestion/motivation would have been to efficiently control transmission power of a shared control channel (Ishii, para. 0025).

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*Choi, Ishii, and Lee* do not expressly disclose the difference between the power level of the shared packet channel at the present transmission interval ( $P_{PDS}(t)$ ) and at the previous transmission interval ( $P_{PDS}(t-1)$ ).

*Yu* discloses a factor  $D_p$  is updated by subtracting a previous power interval from a current power interval (para. 0064).

*Choi, Ishii, Lee, and Yu* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the power measurement as taught by *Yu* into the invention of *Choi, Ishii, and Lee*.

The suggestion/motivation would have been to determine whether the power of the corresponding input signal is stationary (*Yu*, para. 0064).

As to claim 13, *Choi, Ishii, and Lee* further disclose the method according to claim 12, wherein the power level of the second part ( $P_{SC\_P2}(t)$ ) equals the sum of the power level of the first part ( $P_{SC\_P1}(t)$ ) and the function ( $F$ ) (*Lee*, fig. 1,  $E_b/N_{t\_mod} = (E_b/N_{t\_new}) + F$ ). In addition, the suggestion/motivation would have been to perform power control in a communication system (*Lee*, para. 0009).

16. **Claims 14, 18-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2005/0043051 A1 to *Takano et al.* ("*Takano*") in view of U.S. Publication No. 2004/0086137 A1 to *Yu et al.* ("*Yu*") and U.S. Publication No. 2002/0173270 A1 to *Buer*.

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As to **claim 14**, *Takano* discloses a transmission unit (fig. 4, BS), comprising:

a first unit for receiving scheduled first data for transmission on at least a first channel (fig. 4, para. 0220, receiving data on UL DPCH), a power control unit for the first channel responsive to a respective closed loop power regulation signal (para. 0220);

a packet data scheduler for scheduling second data packets for transmission on at least a second channel at an actual power level ( $P_H(t)$ ) (para. 0221, scheduling based on measured values, transmitting down DL-DPCH at a power level);

wherein the transmission unit (BSS) for each scheduling interval of high speed packet data operating the packet data scheduler (fig. 4, para. 0220, receiving data on UL DPCH, this is a scheduling interval) according to the steps of:

receiving the first scheduled data (fig. 4, para. 0220, receiving data on UL DPCH);

determining a possible power ( $P_{POS}(t)$ ) at a given instance as the maximum value of either the actual power ( $P_{HS}(t-1)$ ) at a previous instance or the possible power determined at a previous instance ( $P_{POS}(t-1)$ ) (para. 0020, para. 0220, predetermined target SIR, i.e. possible power, predetermined means at a previous instance, and it is a target hence the maximum),

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the mobile station determining a permitted power ( $P_{\text{PERM}}(t)$ ) at a given instance as the maximum value of an actual power of a previous instance ( $P_{\text{HS}}(t-1)$ ) added with a predetermined value ( $d$ ) (fig. 8, step S10).

*Takano* does not expressly disclose under which at least the transmit power rate of change is limited to a predetermined value per time unit; wherein the outputted first and second channels are subject to interference from one another; decreasing the maximum value by a predetermined value ( $d$ ), and, determining a permitted power ( $P_{\text{PERM}}(t)$ ) at a given instance as the maximum value of either the actual power of a previous instance ( $P_{\text{HS}}(t-1)$ ) added with the predetermined value ( $d$ ) or the determined possible power ( $P_{\text{POS}}(t)$ ).

*Yu* discloses in fig. 7, decreasing power  $a(n-1)$  by  $D2$ . Furthermore,  $a(n)$  is determined as a max after  $a(n) = a(n-1) + D1$ . Even more, there is an interference signal (para. 0086).

*Takano and Yu* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the power measurements as taught by *Yu* into the invention of *Choi, Ishii, and Lee*.

The suggestion/motivation would have been to estimate power (*Yu*, para. 0058).

*Buer* discloses adjacent channel signal interference (para. 0042). Furthermore, power is measured in watts (i.e. Joules/second) (para. 0059).

*Takano, Yu, and Buer* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interference and measurements as taught by *Beur* into the invention of *Takano and Yu*.

The suggestion/motivation would have been to control uplink power and detection (*Beur*, para. 0002).

As to claim 18, *Takano, Yu, and Buer* further disclose the transmission unit according to claim 14, wherein the first and second channels are coded using code division multiplex access (CDMA) coding (*Takano*, para. 0207). In addition, the same suggestion/motivation of claim 14 applies.

As to claim 19, *Takano, Yu, and Buer* further disclose the transmission unit according to claim 14, wherein the second data packets (DATA1) are high-speed data rate packets (HSDPA) (*Takano*, para. 0005-0006). In addition, the same suggestion/motivation of claim 14 applies.

17. **Claims 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2005/0043051 A1 to *Takano et al.* ("*Takano*"), U.S. Publication No. 2004/0086137 A1 to *Yu et al.* ("*Yu*") and U.S. Publication No. 2002/0173270 A1 to *Buer* and in further view of U.S. 2004/0203782 A1 to *Peng et al.* ("*Peng*").

As to claim 15, *Takano, Yu, and Buer* further disclose wherein a mobile station for each scheduling interval of high speed packet data operates the high speed packet data scheduler according to the further step of: depending on the available data to be transmitted, scheduling the data at a power level lower or equal to at least a permitted power ( $P_{\text{PERM}}(t)$ ) (*Takano*, fig. 8, steps S10-S11).

*Takano, Yu, and Buer* do not expressly disclose *the transmission unit (BSS)* for each scheduling interval of high speed packet data operates the high speed packet data scheduler according to the further step of: depending on the available second data (DATA1) to be transmitted, scheduling the second data (DATA1) at a power level lower or equal to at least the permitted power ( $P_{\text{PERM}}(t)$ ).

*Peng* discloses all base stations are permitted to adjust the window of transmitting power in forward traffic channels only at the end of the period (para. 0090).

*Takano, Yu, Buer and Peng* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the adjusting base station power levels as taught by *Peng* into the invention of *Takano, Yu, and Buer*.

The suggestion/motivation would have been to adjust the transmitting power of the base station when transmitting power in forward traffic channels are adjusted when soft handoff status changes (*Peng*, para. 0090).

As to claim 16, *Takano, Yu, and Buer* further disclose wherein the mobile station for each scheduling interval of high speed packet data operates the high speed packet data scheduler according to the further steps of:

determining a remaining power ( $P_{AVBL}(t)$ ) as the total power budget remaining for high speed packet data transmission after scheduling of common and dedicated channels (fig. 5, paras. 0225-0229, measuring power based on common and dedicated physical channel, then determining a power offset);

determining an available power ( $P_{AVBL}(t)$ ) as the minimum value of either the permitted power or the remaining power ( $P_{REM}(t)$ ) (Yu, fig. 7, set a(n), i.e. an available power which remains after subtraction, to be a\_min);

and, determining a remaining power ( $P_{AVBL}(t)$ ) as the total power budget remaining for high-speed packet data transmission after scheduling of common and dedicated channels (fig. 5, paras. 0225-0229, measuring power based on common and dedicated physical channel, then determining a power offset).

In addition, the suggestion/motivation would have been to estimate power (Yu, para. 0058).

*Takano, Yu, and Buer* do not expressly disclose *the transmission unit (BSS)* for each scheduling interval of high speed packet data operates the high speed packet data scheduler according to the further steps of: determining a remaining power ( $P_{AVBL}(t)$ ) as the total power budget remaining for high speed packet data transmission after scheduling of common and dedicated channels; determining an available power ( $P_{AVBL}(t)$ ) as the minimum value of either the permitted power or the remaining power

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( $P_{\text{REM}}(t)$ ); and, determining a remaining power ( $P_{\text{AVBL}}(t)$ ) as the total power budget remaining for high-speed packet data transmission after scheduling of common and dedicated channels.

*Peng* discloses all base stations are permitted to adjust the window of transmitting power in forward traffic channels only at the end of the period (para. 0090).

*Takano, Yu, Buer, and Peng* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the adjusting base station power levels as taught by *Peng* into the invention of *Takano, Yu, and Buer*.

The suggestion/motivation would have been to adjust the transmitting power of the base station when transmitting power in forward traffic channels are adjusted when soft handoff status changes (*Peng*, para. 0090).

As to claim 17, *Takano, Yu, Buer, and Peng* further disclose the transmission unit according to claim 16, wherein the transmission unit (BSS) for each scheduling interval of high speed packet data (*Peng*, all base stations are permitted to adjust the window of transmitting power in forward traffic channels only at the end of the period (para. 0090)) operates the high speed packet data scheduler according to the steps of:

depending on the available second data (DATA1) to be transmitted, scheduling the second data (DATA1) at a power level lower or equal to at least the available power ( $P_{\text{AVBL}}(t)$ ) (*Takano*, fig. 8, steps S10-S11, i.e. setting power to permitted power, and



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since available power is min of permitted or remaining, it encompasses this). In addition, the same suggestion/motivation of claim 16 applies.

18. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2005/0043051 A1 to *Takano et al.* ("*Takano*") in view of U.S. Publication No. 2004/0086137 A1 to *Yu et al.* ("*Yu*") and U.S. Publication No. 2003/0003941 A1 to *Goto et al.* ("*Goto*").

As to **claim 20**, *Takano* discloses a method of scheduling and transmitting data packets to user entities, comprising the steps of:

receiving first scheduled data pertaining to at least a dedicated channel (para. 0223, data received, dedicated physical channel established);

determining a possible power ( $P_{POS}(t)$ ) at a given instance as the maximum value of either the actual power ( $P_{HS}(t-1)$ ) at a previous instance or the possible power determined at a previous instance ( $P_{POS}(t-1)$ ) (para. 0020, para. 0220, predetermined target SIR, i.e. possible power, predetermined means at a previous instance, and it is a target hence the maximum),

determining a permitted power ( $P_{PERM}(t)$ ) at a given instance as the maximum value of an actual power of a previous instance ( $P_{HS}(t-1)$ ) added with a predetermined value ( $d$ ) (fig. 8, step S10).

and, scheduling and transmitting packet data on at least a second channel (para. 0230, base station transmits data through HS-PDSCH).

*Takano* does not expressly disclose wherein channels are subject to interference from one another, decreasing the maximum value by a predetermined value ( $d$ ), determining a permitted power ( $P\_PERM(t)$ ) at a given instance as the maximum value of either the actual power of a previous instance ( $P\_HS(t-1)$ ) added with the predetermined value ( $d$ ) or the determined possible power ( $P\_POS(t)$ ), and whereby the actual power ( $P\_H(t)$ ) is held within at least the permitted power,  $P\_PERM(t)$ .

*Yu* discloses in fig. 7, decreasing power  $a(n-1)$  by  $D2$ . Furthermore,  $a(n)$  is determined as a max after  $a(n) = a(n-1) + D1$ . Even more, there is an interference signal (para. 0086).

*Takano and Yu* are analogous art because they are from the same field of endeavor with regards to data communication.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the power measurements as taught by *Yu* into the invention of *Takano*.

The suggestion/motivation would have been to estimate power (*Yu*, para. 0058).

*Goto* discloses a maximum power available for transmission, and power in use is kept below that (fig. 2). Furthermore, there is mutual interference between communication channels (para. 0103).

*Takano, Yu, and Goto* are analogous art because they are from the same field of endeavor with regards to data communication.

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At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interference and power limitation as taught by Goto into the invention of Takano and Yu.

The suggestion/motivation would have been to allow the limited power of a radio base station to be used efficiently, and to achieve proper allocation (Goto, para. 0009, 0103)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR GHOWRWAL whose telephone number is (571)270-5691. The examiner can normally be reached on Monday-Thursday, 8:00am-5:00pm est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on (571)272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/O. G./  
Examiner, Art Unit 2416

/Derrick W Ferris/  
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